



Serial Number 09/670,028

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**APPENDIX B**  
**(Marked-Up Copy Of Amended Claims)**

1. (Twice Amended) A method for processing a material by locally raising a temperature of the material by transferring energy to the material in order to facilitate chemical reactions or processes related to processing of the material, comprising the steps of:
  - providing a cryogenic medium;
  - causing an electrode to emit or attract electrons by applying voltage pulses to the electrode to cause propagation of a succession of thermal spikes or shockwaves in the cryogenic medium; and
  - varying an energy of the thermal spikes or shockwaves by varying the energy of said electrons emitted by or attracted to the electrode,
  - wherein a dimension of said thermal spikes or shockwave is on the order of less than one nanometer to several tens of micrometers, and
  - a total [area] linear dimension of the material affected by energy carried by the thermal spikes or shockwaves, is on the order of less than one nanometer [squared] to several tens of [square] micrometers.